

## **Abstract**

An Enhanced Shared Secret Provisioning Protocol (ESSPP) provides a novel method and system for adding devices to a network in a secure manner. A registration process is  
5 launched at two network devices together within a predetermined time interval. These two devices then automatically register with each other. When two devices running ESSPP detect each other, they exchange identities and establish a key that can later be used by the devices to mutually authenticate each other and generate session encryption keys. With ESSPP, two ESSPP devices that are attempting to register with each other will only provision a key when  
10 they detect that they are the only two ESSPP devices on the wireless network running ESSPP. If additional devices running ESSPP are detected, the ESSPP protocol is either terminated or suspended.